

DEPARTMENT OF ENERGY  
FY 1999 CONGRESSIONAL BUDGET REQUEST  
ENERGY CONSERVATION  
(Tabular dollars in thousands, Narrative in whole dollars)

FEDERAL ENERGY MANAGEMENT PROGRAM

PROGRAM MISSION

I. A. Statement of Mission

The Federal Energy Management Program (FEMP) leads the Federal sector in reducing the cost of government by advancing energy efficiency, water conservation and the use of solar and other renewable energy. As the world's largest consumer of energy, the Federal Government has a tremendous opportunity to put in place sound business practices. These business practices will save hundreds of millions of taxpayer dollars each year; dollars that can be spent for productive uses, or credited to support a balanced budget, instead of being used to pay energy bills. The Energy Policy Act of 1992 requires the Federal Government to become more energy efficient. President Clinton reinforced this requirement in Executive Order 12902. This order directs Federal agencies to improve their energy efficiency 30 percent by 2005, compared to their 1985 levels. Meeting these requirements has the potential to deliver cumulative energy cost savings of more than \$15 billion by 2015. While these activities warrant funding on their own merits, they also offer environmental benefits and demonstrate to state and local governments and the private sector how energy management can stimulate markets and create local jobs. The Executive Order assigned responsibility for coordinating agency compliance efforts to the Department's Federal Energy Management Program.

Federal Energy Management has a solid record of success but must double its efforts to achieve the 30 percent goal. The Federal Energy Management Program has achieved impressive gains, exceeding its interim goal of reducing energy consumption in Federal buildings by 10 percent per square foot between 1985 and 1995. Since 1985, Federal energy consumption has declined by almost 24.0 percent. Over a ten year period, these reductions translate into \$14.2 billion in Federal savings with associated environmental benefits. Additional savings are expected to accrue through 2015 from many of the efficiency investments in place in 1995. However, the EPAct and Executive Order goals have challenged agencies to make even greater cuts in energy use. To help agencies meet this challenge, the Federal Energy Management Program has developed broad, streamlined Super Energy Savings Performance Contracts that allow Federal agencies to reap early benefits from energy efficiency and renewable energy improvements. With these contracts, private firms incur the costs of installing energy retrofits at Federal facilities in exchange for a share of the resulting energy savings. To support this effort, the Department will continue activities begun in FY 1998 of recovering funds from other agencies as reimbursements provided under Interior and Related Agencies Appropriations Act of 1998, P.L. 105-83. This law allows the Department of Energy to accept funds from Federal agencies in return for FEMP's assistance with Energy Savings Performance Contracts and other private financing mechanisms. These recovered funds will continue to be used to administer even greater energy efficiency, water conservation, and use of renewable energy by means of privately financed mechanisms, including Energy Savings Performance Contracts. These recoverable funds will cover all necessary program expenses, including contractor support, to achieve overall FEMP program objectives for greater

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energy savings. Initial appropriations in FY 1998 and FY 1999 provide the principal source of funds for the start-up of FEMP's assistance to other agencies. In the initial years of the process, revenues are expected to be small relative to appropriations, but will build in later years as assisted agency savings are realized. In FY 1999, FEMP will contingent upon additional legislative authority, expand its ESPC assistance to support energy improvements in Federal leased space. In addition, FEMP plans to initiate ESPCs for mobile equipment including aircraft, ships, and heavy duty vehicles as a new component of its technical and financial assistance programs.

FEMP continues to work with Federal agencies, states, utilities, energy service companies, product manufacturers and other interested parties to bring all relevant public and private resources to bear on meeting the need to accelerate Federal buildings energy efficiency improvement. FEMP is implementing internal improvements to streamline and target its operations to those activities that will achieve the greatest return on the Federal dollar, while at the same time ensuring responsive, high quality assistance to all Federal agencies. FEMP delivers assistance through the six Energy Efficiency and Renewable Energy Regional Support Offices in order to match local resources with local Federal facility needs. Funding needed to supplement agency appropriations is being aggressively pursued through regional Super Energy Savings Performance Contracts (ESPCs), utility and industry partnerships and GSA negotiated utility area-wide contracts, and through Federal-state partnerships. FEMP's new ways of doing business are leading to increased success, lower program cost per dollar saved, and greater levels of quality service.

The Federal Energy Management Program is a customer-focused organization providing services to other Federal agencies. When FEMP succeeds at its mission, agencies have the skills, the means, and the initiative to undertake projects to use energy and water more efficiently, and to promote the use of renewable resources. FEMP focuses on making sure agencies complete energy efficiency and renewable energy projects; since only by completing projects can the Federal sector achieve its broader energy and cost saving goals. For example, savings within DOE from years of completing energy projects have generated over \$10.0 million in annual savings. The Federal Energy Management Program sets a positive example for the Nation by transferring the Federal energy experience to State and local governments and ultimately to the private sector.

By using its energy wisely, the Federal Government not only sets a good example but increases its productivity and gets better value for its energy dollars spent. Through Federal leadership and purchasing power, energy efficient products obtain a foothold in the economy and the Government gets even greater value for its purchase. Environmental waste and damage are reduced through energy efficiency and environmentally-sound technologies and techniques. In addition, these investments help preserve the capital infrastructure of the Federal Government, preventing premature deterioration. Government operations and practices become a model for other agencies, State and local governments, corporate purchasers, and energy and facility managers.

In order to achieve its mission, FEMP must provide: (1) alternative methods of financing projects, (2) technical assistance for project identification, training and up-to-date technical information necessary to successfully implement projects, (3) leadership in Federal energy management by demonstrating success in its own DOE facilities, and (4) transfer of knowledge about successful projects to

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encourage others to achieve additional progress toward the goals. A more detailed discussion of these activities is included under Section I., Mission Supporting Goals and Objectives.

### I. B. Program Benefits

Estimated FEMP program benefits are based on accomplishing both the requirements and goals of the Energy Policy Act of 1992 and Executive Order 12902 for the years 2000 and 2005, as noted in Section I.C., Performance Measures, below. These projected benefits result directly from the actions of all Federal agencies to effectively manage their energy utilization in buildings. Savings projected include anticipated savings in new construction, as well as in retrofit of existing facilities. Estimates of the potential benefits for mobility efficiency improvements are provided but are contingent upon enabling legislation. There are also savings through impacts of increased purchasing and utilization of high efficiency energy consuming products under the Federal Procurement Challenge. To achieve these savings, success is dependent upon reducing barriers to and implementing energy efficiency improvements. These actions are, in turn, dependent upon the steady investment of Federal resources in both: FEMP activities to provide technical assistance, alternative financing mechanisms, and interagency coordination; and related activities at other Federal agencies. Initiation of work on ESPCs for Federal-leased space, combined heat and power and biomass co-firing in Federal boilers, will lead to additional benefit estimates once the Federal market potentials have been assessed. Additional benefits of energy management, although not currently projected, will accrue as well, including increased worker productivity and improved health and safety conditions. A long-term benefit of all these activities is building an infrastructure in Federal agencies that institutionalizes energy efficiency as a standard business practice. Benefits have been adjusted to reflect a 1 percent per year decrease in buildings square footage.

### FEMP Quality Metrics Based on Benefits with Current Legislation

Metric (Annual Savings Achieved in Year)

<b>Federal Buildings*</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>
Total Primary Energy Displaced (Quads)	.061	.165	.235
Total Cost Savings in Year*** (1995 \$-Billions)	.418	1.039	1.566
Carbon Equivalent Savings (MMTCE)	1.16	3.00	4.23

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**FEMP Potential Quality Metrics Benefits with New Legislation**

Metric (Annual Savings Achieved in Year)

<b>Federal Buildings*</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>
Total Primary Energy Displaced (Quads)	.061	.165	.235
Total Cost Savings in Year*** (1995 \$-Billions)	.418	1.039	1.566
Carbon Equivalent Savings (MMTCE)	1.16	3.00	4.23
<b>Federal Mobility**</b>			
Total Primary Energy Displaced (Quads)	0	.071	.071
Total Cost Savings in Year*** (1995 \$-Billions)	0	.373	.352
Carbon Equivalent Savings (MMTCE)	0	1.40	1.40
<b>Totals</b>			
Total Primary Energy Displaced (Quads)	.061	.236	.306
Total Cost Savings in Year*** (1995 \$-Billions)	.418	1.412	1.918
Carbon Equivalent Savings (MMTCE)	1.16	4.40	5.63

The above estimates were made using the conventions of the Office of the Energy Efficiency and Renewable Energy's GPRA Quality Metrics process. Assumptions are as follows:

- \* The Federal government procures "green power" in a restructured utility environment at the rate of one percent of consumption in FY 2000, 4 percent in 2010 and 2020.
- \*\* Contingent upon additional legislative authority, Energy Savings Performance Contracts for Federal mobility are estimated to save 10% of current mobility energy in 2010.
- \*\*\* Actual Federal deficit reduction potential is dependent upon the mix of financing used to achieve the savings, e.g., the higher the proportion of direct appropriations to support efficiency, the higher the potential for direct savings to the government. The higher the portion of alternate/private financing, the lower the direct savings due to higher costs of projects which use financing by the private sector.

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Note: FEMP cumulative buildings energy cost savings from FY 1995 levels are projected to be \$7.8 billion by 2002, netting \$15 billion by 2015. This reflects savings from Federal capital investment in place through 1995, as well as from investments projected to be made from FY 1996 through 2005.

### I. C. Performance Measures

The following represents some of the performance measures that will be used by FEMP to track its commitments to meeting its 2005 goal of improving energy efficiency by 30% from the 1985 baseline, on a Btu/gross square foot basis.

#### Summary of 1997 Accomplishments:

- Awarded 1 Government-wide "FREE Savings" Super Energy Savings Performance contracts for agencies to use.
- Achieved an additional \$40 million or more in private sector investment in Federal facility energy projects.
- Transferred 3 "Greening" models to other Federal sites.
- Implemented and documented 3 renewable energy projects including 2 solar hot water systems and one photovoltaic system installed at 2 National Parks and one Bureau of Reclamation facility.
- Issued 7 new energy efficient product recommendations.
- Initiated 8 additional Energy Savings Performance Contracts at Government-operated facilities that will be models to Federal agencies.

#### FY 1998 Performance Measures:

- Increase the routine use of renewable energy technologies at Federal facilities through the completion of one government-wide solar technology Super-Energy Savings Performance Contract (Super-ESPC).
- Complete two model delivery orders integrating cost-effective solar technology and energy efficiency.
- Complete solicitation and award for 5 Regional Super-Energy Savings Performance Contracts totaling about \$3.8 billion in contract authority.
- Award initial three Western Region Super-ESPC delivery orders and award two ESPC delivery orders at DOE sites.

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- Conduct audits that identify 30% energy savings at selected agencies.
- Document transfer of Greening Models to show replication at other Federal sites.
- Assist 10 additional renewable energy projects as a direct result of the first 3 projects.
- Publish 15 new technical information products, including 10 energy efficient product recommendations.
- Provide 30 technical project recommendations to agency facilities.

#### FY 1999 Performance Measures:

- Support expansion of Energy Savings Performance Contracting Authority to include mobility, leased space for buildings and water conservation.
- Complete two Energy Savings Performance Contracts for renewable energy.
- Assist 15 new renewable energy projects.
- Publish 22 technical information products, including 12 energy efficient product recommendations.
- Provide 45 technical project recommendations to agency facilities, including audits and greening projects as well as general energy efficiency projects.
- Initiate 2 Federal projects to demonstrate combined heat and power and biomass cofiring in Federal power plants.

#### FY 2000 Performance Measures:

- Initiate ESPCs as a result of projected new legislative authority for mobility, leased space for buildings and water conservation.
- Track energy savings and costs as well as leveraged dollars from private sector investments.
- Achieve 20% building energy reduction compared to 1985 energy use baseline.

#### FY 2001 - 2002 Performance Measures:

- Reduce DOE energy consumption by 30% versus the 1985 baseline.

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### Significant Accomplishments and Program Shift

#### Significant Accomplishments:

Through FEMP's efforts, the Federal Government has already achieved success in energy efficiency and cost savings. Fiscal year 1996 highlights show that Federal buildings energy consumption continued to fall dramatically, resulting in more than \$1.95 billion in energy savings in FY 1996, with cumulative savings of \$14.2 billion (1996 constant dollars) from the 1985 baseline. In FY 1996, the Government continued its pattern of efficiency improvement by achieving a 15.2% efficiency improvement in buildings compared to 1985 usage. Six agencies, the Departments of Energy, Agriculture, Commerce, Justice, NASA, and Interior, have already achieved the year 2000 20 percent reductions, with 11 more agencies exceeding 10 percent reductions.

To achieve greater energy savings, FEMP accelerated its efforts to help agencies find the necessary capital for their energy efficiency projects. FEMP issued an Energy Savings Performance Contracting regulation (10 CFR 436), designed to significantly increase investments in cost-effective energy efficiency measures in existing Federal buildings beyond what can be purchased with scarce appropriated funds. FEMP is continuing to put in place 6 regional Super Energy Savings Performance Contracts covering all agencies and facilities across the Nation and prepared the way for a dozen more. As a result of FEMP negotiations, utilities continue to commit millions for energy efficiency and renewable energy improvements.

FEMP continues its approach of stationing teams of experts in all six Regional Support Offices to help Federal energy managers in the field implement efficiency improvements in their buildings and operations. FEMP has worked with the Office of Management and Budget to implement the Federal Procurement Challenge formally called the Energy Efficiency and Resource Conservation Challenge. The Federal Procurement Challenge is a voluntary, government-wide commitment that uses the buying power of the Federal Government to support and expand markets for the latest energy efficiency and water conservation products, create new entry markets for advanced, energy-saving technologies and products, and reduce operating costs for Federal agencies. Twenty-two agencies have accepted the Challenge and are working to achieve its goals. FEMP will expand efforts in this area and make more information available on the most energy efficient products for agencies to procure.

FEMP completed three new "Greening" projects in FY 1996: The Pentagon Showcase; The Presidio; and The Department of Energy Headquarters, Forrestal and Germantown Buildings. A report on Greening DOE Headquarters was submitted to the Secretary on Earth Day, April 22, 1996, which summarized 84 recommendations. Twenty-five of those recommendations are underway such as general use of efficient lighting, windows, and low volatile organic compound paint. This effort is now focussed on developing an Energy Savings Performance Contract to implement green designs. Working with the National Park Service, the Greening of the Grand Canyon and the Presidio are complete, while Greening activities are underway at Yellowstone and Yosemite National Parks. FEMP is successfully moving ahead in making information available about the Greening technologies available to all Federal facilities, and in applying the technologies to showcase facilities. The final version of the Greening Federal Facilities, an Energy and Environmental

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Resource Guide for Federal Facility Managers handbook and internet information was available in FY 1997, the electronic version is on the FEMP web page, and a Federal Greening Initiatives CD was published in 1997.

During FY97, FEMP's training program began a detailed self assessment that will provide continuous improvement to training courses. The pilot satellite training courses were very successful, enabling the training program to reach significantly more students at reduced costs. The SAVEnergy audit program continues to focus on turning audits into projects. As the Regional Energy Savings Performance Contracts (SuperESPC's) are implemented, the audit program is adjusting to provide audits that can easily be turned into delivery orders under the ESPCs. Technical Project assistance supports integrated projects like the energy efficiency and renewable retrofits at the Bureau of Reclamation's Carl Hayden Visitors Center at Glen Canyon Dam. Retrofits include lighting, controls, refurbishing a solar water heater and replacing the windows. Savings from the overall package will pay for itself in five years.

### Program Shift:

Prior to FY 1996, FEMP taught hundreds of Federal energy managers how to initiate Energy Savings Performance Contracts. In each case, FEMP assisted the agencies in putting in place their own contracts. However, in FY 1996 FEMP initiated a new "FREE Savings" Super Energy Savings Performance Contracting approach. This new approach allows agencies to "order energy savings" from FEMP regional or national energy savings performance contracts. This new approach streamlines and centralizes the complex contracting functions but allows facilities from all agencies to tailor the savings techniques to their specific needs. This will speed the introduction of privately-financed energy efficiency measures into the Federal sector. In FY 1998, in accordance with Congressional intent, FEMP will continue the process of recovering funds from other agencies as reimbursements provided under P.L. 105-83. This law allows the Department of Energy to accept funds from Federal agencies in return for FEMP's assistance with energy savings performance contracts and other private financing mechanisms. Fund may be recovered from agencies after energy cost savings are realized and retained by the Department until expended. They will then be used in support of overall FEMP program objectives to achieve greater energy efficiency, water conservation, and use of renewable energy by means of privately financed mechanisms, including Energy Savings Performance Contracts.

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PROGRAM FUNDING PROFILE

Federal Energy Management Program

Activity	FY 1997	FY 1998	FY 1999	FY 1999	Program Change Request vs. Base	
	Enacted	Enacted	Base	Request	Dollar	Percent
Federal Energy Management Program						
Operating Expenses .....	\$ 19,800	\$ 19,800	\$ 19,800	\$ 33,868	\$ 14,068	71%
TOTAL .....	<u>\$ 19,800</u>	<u>\$ 19,800</u>	<u>\$ 19,800</u>	<u>\$ 33,868</u>	<u>\$ 14,068</u>	<u>71%</u>
Summary						
Operating Expenses .....	\$ 19,800	\$ 19,800	\$ 19,800	\$ 33,868	\$ 14,068	71%
Total Program .....	<u>\$ 19,800</u>	<u>\$ 19,800</u>	<u>\$ 19,800</u>	<u>\$ 33,868</u>	<u>\$ 14,068</u>	<u>71%</u>
Staffing (FTE's)						
HQ FTEs .....	23	20	20	20		
Field FTEs .....	0	0	0	0		
Total FTEs .....	<u>23</u>	<u>20</u>	<u>20</u>	<u>20</u>		

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SUMMARY OF CHANGES

Federal Energy Management Program

FY 1998 Enacted .....	\$ 19,800
- Non-Discretionary .....	<u>\$ 0</u>
FY 1999 Base .....	\$ 19,800

Federal Energy Management Program

- Project Financing - The increase will support expansion of ESPC in buildings and support expansion to mobility and position the Federal government to take advantage of utility opportunities for energy efficiency .....	+5,964
- Technical Guidance and Assistance - The increase includes increased delivery of project assistance and technical information products as well as Federal procurement of energy efficient technologies such as consolidated purchasing to stimulate markets and lower prices and simplified design and purchasing of solar systems for Federal customers .....	+4,404
- Planning, Reporting, and Evaluation - The increase includes additional technical and analytical support to resolve issues related to energy and water conservation and renewable energy use to make updated policy changes that will impact energy markets such as utility restructuring and green power procurement .....	+2,600
- Program Direction - The increase supports additional FTEs needed to manage expanded finance and technical assistance program efforts .....	<u>+1,100</u>
FY 1999 Congressional Budget Request .....	\$ 33,868

FEDERAL ENERGY MANAGEMENT PROGRAM  
(dollars in thousands)

**I. Mission Supporting Goals and Objectives:**

In performance of its mission, the Federal Energy Management Program is an integrated program working to achieve the Federal energy management goals set forth in the Energy Policy Act of 1992, and in the Executive Order 12902 and other relevant laws. FEMP must provide: (1) alternative methods of financing projects, (2) technical assistance for project identification, training and up-to-date technical information necessary to successfully implement projects, (3) leadership in Federal energy management by demonstrating success in its own DOE facilities, and (4) transfer of knowledge about successful projects to encourage others to achieve additional progress toward the goals.

**PROJECT FINANCING: FUNDING THE BEST PROJECTS**

FEMP will use a variety of mechanisms to help agencies finance projects and achieve budget savings. It will maximize its efforts to emphasize the expanded use of non-Federal funding to invest in Federal energy savings projects. These projects, which achieve a partnership with industry and the agencies, can reduce future utility budgets by as much as 25 times the amount invested by the Government. FEMP will continue to act as the central point of contact within the 100+ Federal agencies to establish Energy Savings Performance Contracts, to disseminate guidance, interpret policy, and train Federal employees on using this contracting mechanism. The critical step in expanding the use of these contracts will be the establishment of a series of FEMP "Free Savings" Super Energy Savings Performance Contracts (ESPC) for use by all agencies and by demonstrating their success at DOE facilities. These contracts will allow Federal facilities rapid access to the private capital and energy services that was envisioned in the language establishing Energy Savings Performance Contracting authority. FEMP plans to put in place over 20 of these Government-wide contracts to allow all agencies to order energy savings from energy savings performance contracts for all efficiency, solar and renewable technologies.

In addition, FEMP will concentrate on expanding the use of utility incentive programs and financing mechanisms. These programs can provide incentives, utility financing and specialized technical assistance to complete Federal energy projects. As utilities move to greater competition, FEMP is needed to evaluate emerging opportunities within the restructuring utility industry and report to other agencies on using the new utility services ranging from incentives to loans for energy retrofit services.

FEMP also will provide direct financial assistance to implement the very best projects that bring new products and services to the Federal marketplace. These projects can provide the leadership in the Federal sector in a specific technology, financing, or contracting mechanism to overcome the initial reluctance of the Federal and private sector markets to try new methods and products despite their potential. This approach to managing the risk of new products and services will ensure the speedy introduction of all appropriate energy and cost savings approaches.

**I. Mission Supporting Goals and Objectives: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

Together these efforts will create over \$5 billion in Federal energy savings contracts, paid from delivered energy cost savings. These efforts will lead to over \$1 billion in annual Federal energy cost reductions from 1995 levels by the year 2010.

**TECHNICAL GUIDANCE AND ASSISTANCE: IDENTIFYING AND IMPROVING THE BEST PROJECTS**

FEMP's technical expertise is provided to agencies to support many more projects than FEMP can assist directly, by ensuring Federal energy managers have access to the latest information and techniques to help them make their own investment decisions. The Technical Assistance Program will continue to provide and improve assistance to agencies for specific targeted projects, including SAVEnergy audits, and project design assistance for energy efficiency, renewable energy and water conservation projects. These projects will serve as practical examples to the rest of the Federal sector and provide targeted cost-effective use of FEMP's resources. These projects are a source for new technical information and validate technical information in the real world of budget constraints, contract requirements, and competing demands. Technical information such as case studies will be made available on as many of these projects as possible. Some of the projects are agency showcases which serve as examples for that agency and all Federal facilities. Project assistance provides technical support for "FREE Savings" Super Energy Savings Performance Contracts delivery order development work, especially in setting examples of projects that save high percentages of energy. All Technical Assistance programs support these efforts.

The SAVEnergy program targets those sites with the greatest opportunities through a pre-screening process, then develops a SAVEnergy Action Plan to carry forward typical audit data and analysis into cost-saving energy and water projects. The Program emphasizes providing the necessary information to turn the audit into a "FREE Savings" Super Energy Savings Performance Contract. Design or project assistance ranges from identifying the best opportunities through feasibility studies, design reviews, and technical specification recommendations to suggestions for funding. This area is also the central focus within FEMP for the expansion of cost-effective renewable energy use within the Federal Sector. The program has participated directly in the implementation of cost-effective solar projects with the National Park Service, Federal Bureau of Prisons, General Services Administration, Departments of Defense, Interior, Transportation and other agencies.

The program also focuses on efforts to reduce water use comprehensively as required by EPAct. Water efforts include identifying Federal customers' technical and educational needs, deployment of tools and training to meet those needs, and facilitation of projects which will demonstrate and measure water conservation potential and transfer that knowledge to other Federal sites. The water program is closely linked with SAVEnergy and "FREE Savings" Super Energy Savings Performance Contracts to move water conservation opportunities to actual project installation.

The Technical Assistance Program will also continue to provide and improve training, technical information, and decision making tools. This technical information and training helps agencies make the most energy efficient and life-cycle cost effective decisions when spending resources that affect energy. FEMP is exploring new ways to maintain quality training for agencies at reduced funding levels by charging tuition, empowering self-supporting "DOE-Qualified Instructors," and expanding leveraging access to students

## **I. Mission Supporting Goals and Objectives: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

through partnering with other agencies in the use of teleconference training and self-paced computer based multi-media training packages. FEMP is also working with utilities and other non-government partners to provide training, information, and tools at regionally based Resource Centers that use FEMP materials and the partners' human resources.

Energy Efficient Procurement uses the Government's buying power - at least \$12-15 billion in annual purchases of energy and water-related products - to support sound Federal purchasing practices and speed the commercialization of cost-effective new technologies that save energy and water. The Federal Procurement Challenge is a keystone activity in this effort. Product Energy Efficiency Recommendations (PEERS) identify the most efficient products in a two-page format useful for energy managers and their procurement officials. FEMP will seek out a Federal agency prepared to be the lead purchaser of a new high energy efficient product. FEMP will assist this agency with specification writing, preparing the RFP, and in finding other purchasing partners to attract substantive proposals.

FEMP provides technical capabilities and software tools to evaluate energy projects quickly, in a fuel neutral analysis, to identify the most life-cycle cost-effective projects in a facility. Through new technology demonstrations, FEMP partners with industry to evaluate new, cost-effective, energy efficient, U.S. manufactured technologies that are not yet widely used in the Federal sector. FEMP will partner with other DOE programs, such as the Motor Challenge, to apply those programs to Federal customers, and to bring the many opportunities of the Federal Sector to those programs.

Additional funds in FY 1999 will expand all efforts to achieve base 2005 energy efficiency and renewables goals and thus result in assistance to about 20 more projects, more training and 7 additional new technical information products, as well as other related tasks. Additional funds will also specifically target new tasks that reduce carbon use in the Federal sector. Additional funds will expand efforts to help agencies buy the most energy efficient products to leverage existing agency funding for equipment purchases and provide energy savings and carbon reductions for low or no incremental cost. Additional funds will also increase support to Federal facilities participating in the President's Million Solar Roofs initiative, and other cost-effective solar technology purchases, especially by providing streamlined access to solar technologies. Other new activities include expanding use of combined heat and power, as well as biomass co-firing in Federal facilities.

### **PLANNING, REPORTING AND EVALUATION: SUPPORTING AGENCIES**

With the need to significantly increase the number of energy projects resulting from the Energy Policy Act of 1992 and Executive Order 12902, FEMP evaluates existing programs to find the most effective and efficient, cost-saving projects and practices to transfer to others for implementation. The Energy Policy Act of 1992 and Executive Order 12902 require greater analyses, therefore, energy efficiency products, water conservation, renewable energy projects, and life-cycle analysis data are assessed and validated to verify energy savings and environmental benefits. By finding new ways of implementing programs, transferring their successes, overcoming barriers, applying quality metrics, and sharing lessons learned with other agencies, state and local governments, and the private sector, FEMP anticipates much greater agency participation in a wide range of programs to increase energy and water efficiency in the

**I. Mission Supporting Goals and Objectives: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

Federal Government. FEMP will continue to maximize its support for agencies with strong and effective partnerships with industry, utilities and States in FY 1999.

Significant barriers remain for Federal facilities in implementing energy efficiency improvements. Energy issues compete with agency mission and other priorities and messages. FEMP is working to institutionalize energy efficiency so that facility management practices that minimize energy consumption become the standard way of doing business. FEMP is developing regional delivery of services for information and technical assistance and creating new ways to reach facility managers. One way FEMP is addressing procurement barriers is by creating innovative methods to contract for energy services and providing guidance to purchasing officials on energy efficient products. As described earlier, FEMP recently streamlined the process for using energy savings performance contracting to fund projects by issuing regional contracts that significantly reduce the time needed to identify and develop new projects. This regional contract delivery for all agencies along with the recovery of funds from other agencies requires significant analysis and management of a changing organization. Finally, uncertainty in the energy markets stemming from deregulation such as electric utility restructuring and green power procurement are also concerns in implementing energy efficiency improvements.

**II. A.        Funding Table: FEDERAL ENERGY MANAGEMENT PROGRAM**

Program Activity	FY 1997 Enacted	FY 1998 Enacted	FY 1999 Request	\$ Change	% Change
Project Financing . . . . .	\$ 7,000	\$ 7,900	\$ 13,864	\$ 5,964	75%
Technical Guidance and Assistance . . . . .	6,800	6,300	10,704	4,404	70%
Planning, Reporting, and Evaluation . . . . .	4,200	3,800	6,400	2,600	68%
Capital Equipment . . . . .	0	0	0	0	0%
Program Direction . . . . .	1,800	1,800	2,900	1,100	61%
Total, Federal Energy Management Program . . . . .	<u>\$ 19,800</u>	<u>\$ 19,800</u>	<u>\$ 33,868</u>	<u>\$ 14,068</u>	<u>71%</u>

**II. B. Laboratory and Facility Funding Table: FEDERAL ENERGY MANAGEMENT PROGRAM**

Argonne National Laboratory . . . . .	25	0	0	0	0%
Brookhaven National Laboratory . . . . .	25	0	0	0	0%
Lawrence Berkeley National Laboratory . .	1,922	1,978	3,040	1,062	54%
Lawrence Livermore National Laboratory .	55	0	0	0	0%
National Renewable Energy Laboratory . .	6,609	7,527	10,064	2,537	34%
Oak Ridge National Laboratory . . . . .	1,276	1,483	3,354	1,871	126%
Pacific Northwest National Laboratory . .	2,383	2,174	3,110	936	43%
Sandia National Laboratory . . . . .	240	120	160	40	33%
All Other . . . . .	<u>\$ 7,265</u>	<u>\$ 6,518</u>	<u>\$ 14,140</u>	<u>\$ 7,622</u>	<u>117%</u>
Total, Federal Energy Management Program . . . . .	<u>\$ 19,800</u>	<u>\$ 19,800</u>	<u>\$ 33,868</u>	<u>\$ 14,068</u>	<u>71%</u>

### III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)

Activity	FY 1997	FY 1998	FY 1999
Project Financing	<p>Applied several model Energy Savings Performance Contracts for use by all agencies as a means of expediting private sector partnerships in financing and implementing energy and cost savings. These contracts provide a contracting mechanism to cover all geographic regions and enable facilities to take advantage of all life-cycle, cost effective energy efficient, solar and renewable technologies. Provided guidance and training on the establishment and use of Energy Savings Performance Contracts by other agencies. Provided information, guidance, and assistance to all Federal organizations on the use of utility incentives as the utility industry evolves to a more competitive environment. Provided direct project financing for the most promising technologies, financing, and contracting mechanisms to speed introduction. Provided technical support to identify barriers to the use of unique financing methods including the use of private financing for water conservation and mobility energy efficiency improvements and for solar and renewable energy projects. Together these efforts provided \$275 million in Federal budget savings over the life of the</p>	<p>Continue to apply several FREE Savings Super Energy Savings Performance Contracts for use by all agencies as a means of expediting private sector partnerships in financing and implementing energy and cost savings. These contracts will provide a contracting mechanism to cover all geographic regions and enable facilities to take advantage of all life-cycle, cost effective energy efficient, solar and renewable technologies. Continues to provide guidance and training on the establishment and use of Energy Savings Performance Contracts by other agencies and demonstrates their successful use at DOE facilities. Provides information, guidance, and assistance to all Federal organizations on the use of utility incentives as the utility industry evolves to a more competitive environment. Provides direct project financing for the most promising technologies, financing, and contracting mechanisms to speed introduction. Provides technical support to identify barriers to the use of unique financing methods including the use of private financing for water conservation and mobility energy efficiency improvements and</p>	<p>Accelerate the application of several "FREE Savings" Energy Savings Performances Contracts for use by all agencies as a means of expediting private sector partnerships in financing and implementing energy and cost savings. Also, eight new technology specific contracts will be awarded. These contracts will provide a contracting mechanism to cover all geographic regions and enable facilities to take advantage of all life-cycle, cost effective energy efficient, solar and renewable technologies. Continues to provide guidance and training on the use of "FREE Savings" contract by other agencies and demonstrate their successful use at DOE facilities. Provides information, guidance, and assistance to all Federal organizations on the use of utility incentives as the utility industry evolves to a more competitive environment. Increase, to no more than \$1.0 million for direct project financing for the most promising technologies, financing, and contracting mechanisms to speed introduction. Provides technical support to identify methods of private financing for water conservation and mobile equipment including aircraft, ships, and heavy</p>

**III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

Activity	FY 1997	FY 1998	FY 1999
Project Financing (Cont'd)	<p>projects. (NREL, PNNL, LBNL, ORNL, McNeil Technologies, Inc.) (\$7,000)</p>	<p>for solar and renewable energy projects.</p> <p>Together these efforts will create over \$5 billion in Federal energy savings contracts, paid from delivered energy cost savings. There is a substantial increase in speed at which the "FREE Savings" Energy Saver Contracts are put in place, ensuring that contracts for all regions of the country are solicited or awarded by the end of FY 1998. Increase the routine use of renewable energy technologies at Federal facilities through the completion of one government-wide solar technology Super ESPC. (NREL, PNNL, LBNL, ORNL, McNeil Technologies, Inc.) (\$7,900)</p>	<p>duty vehicles, energy efficiency improvements and for solar and renewable energy projects.</p> <p>Together these efforts will create over \$5 billion in Federal energy savings contracts, paid from delivered energy cost savings. There is a substantial increase in speed at which the "FREE Savings" Energy Savings Performance Contracts are put in place, ensuring that contracts for all regions of the country are solicited or awarded by the end of FY 1999 and that at least 12 "FREE Savings" contracts are solicited for advanced and emerging technologies.</p> <p>It is estimated that FEMP will receive about \$2 million as payment from other agencies for their services. These funds will be used to support agencies in meeting EPACT and Executive Order goals. (NREL, PNNL, LBNL, ORNL, McNeil Technologies, Inc.) (\$13,864)</p>
	\$ 7,000	\$7,900	\$ 13,864
Technical Guidance and Assistance	Technical Assistance Program provided and improved a range of assistance to specific projects in	Technical Assistance Program continues to provide and improve a range of assistance to specific	Technical Assistance program provides the technical and training foundation for all of FEMP's efforts

### III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)

Activity	FY 1997	FY 1998	FY 1999
Technical Guidance and Assistance (Cont'd)	<p>Federal agencies on energy efficiency, renewable energy and water conservation. Provided SAVEnergy audits and action plans at targeted sites with the greatest opportunities. Provided project assistance ranging from feasibility studies, design reviews, technical specifications and funding recommendations. Provided and improved training, technical information, and tools to support more projects than FEMP can assist directly. Provided training in lighting, software tools, and renewable technologies. Helped agencies buy the most energy efficient and water conserving products through barrier reduction, policy guidance and product recommendation. Developed and provided software and other tools that help agencies evaluate energy and water projects. Evaluated new, cost-effective energy efficient, U.S. manufactured technologies that are not widely used in the Federal Sector and shared evaluation with Federal users. (NREL, LBNL, PNNL, ORNL, SNL, ORISE, McNeil Technologies, Inc.) (\$6,800)</p>	<p>projects in Federal agencies on energy efficiency, renewable energy and water conservation. Continues to provide SAVEnergy audits and action plans at targeted sites with the greatest opportunities. Continue to provide project assistance ranging from feasibility studies, design reviews, technical specifications and funding recommendations. Continues to provide and improve training, technical information, and tools to support more projects than FEMP can assist directly. Provides training in lighting, software tools, and renewable technologies. Continues to help agencies buy the most energy efficient and water conserving products through barrier reduction, policy guidance and product recommendation. Develops and provides software and other tools that help agencies evaluate energy and water projects. Continues to evaluate new, cost-effective energy efficient, U.S. manufactured technologies that are not widely used in the Federal Sector and shares evaluation with Federal users. (NREL, LBNL, PNNL, ORNL, ORISE, McNeil Technologies, Inc.) (\$6,300)</p>	<p>to identify and implement technically sound and cost-effective energy efficiency, water, and renewable projects at Federal facilities. The overall goal of the program is to enable Federal agencies to make energy efficiency and other aspects of Federal resource management "business as usual." It complements and works with FEMP's Alternative Financing Program. Provides SAVEnergy audits and action plans at targeted sites targeted to lead to alternative financing. Provides project assistance ranging from feasibility studies, design reviews, technical specifications and funding recommendations. Provides and improves training, technical information, and tools to support more projects than FEMP can assist directly. Provides training in energy efficient technologies through classroom, satellite courses and other cost effective delivery mechanisms. Helps agencies buy the most energy efficient and water conserving products through barrier reduction, policy guidance and product recommendation. Develops and provides software and other tools that help agencies screen for energy and water saving projects. Evaluates new,</p>

**III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

<u>Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
Technical Guidance and Assistance (Cont'd)			<p>cost-effective energy efficient, U.S. manufactured technologies that are not widely used in the Federal sector and shares evaluation with Federal users.</p> <p>Additional funds will expand all efforts to achieve base 2005 energy efficiency and renewables goals and thus result in assistance to about 20 more projects, more training and 7 additional new technical information products. Additional funds will also specifically target new tasks that reduce carbon use in the Federal sector. Additional funds will expand efforts to help agencies buy the most energy efficient products to leverage existing agency funding for equipment purchases and provide energy savings and carbon reductions for low or no incremental cost. Additional funds will also increase support to Federal facilities participating in the President's Million Solar Roofs initiative, and other cost-effective solar technology purchases, especially by providing streamlined access to solar technologies. Other new activities include expanding use of combined heat and power, as well as biomass co-firing in Federal facilities.</p>

**III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

Activity	FY 1997	FY 1998	FY 1999
Technical Guidance and Assistance (Cont'd)			(NREL, PNNL, LBNL, ORISE, SNL, McNeil Technologies, Inc.) (\$10,704)
	\$ 6,800	\$ 6,300	\$ 10,704
Planning, Reporting, and Evaluation	<p>Provided interagency coordination and management for developing and implementing energy efficiency, water conservation and renewable energy projects. Provided policy analysis of key issues related to Federal energy and water conservation and renewable energy use, including policy impacts of energy market changes, and Federal energy efficiency improvements as a contributor to environmental and economic benefits and goals. Supported databases of Federal facilities, energy consumption and costs, facility managers, energy efficiency, solar and other renewables and water conservation projects. These databases were used to fulfill mandated reporting requirements. Provided help to agencies in the delivery of an effective technology transfer program to ensure that Federal energy reduction goals were clearly understood and that FEMP's programs were able to be</p>	<p>Continue technical support to provide interagency coordination and management for developing and implementing energy efficiency, water conservation and renewable energy projects in the field. Continue support of policy analyses of key issues related to Federal energy and water conservation and renewable energy use, including policy impacts of energy market changes, and Federal energy efficiency improvements as a contributor to environmental and economic benefits and goals. Continue to support databases of Federal facilities, energy consumption and costs, facility managers, energy efficiency, solar and other renewables and water conservation projects. These databases are used to fulfill mandated reporting requirements. Continue to support agencies in the delivery of an effective technology transfer program to ensure that Federal energy reduction goals are clearly understood</p>	<p>Increase technical support to provide interagency coordination and management for developing and implementing energy efficiency, water conservation and renewable energy projects with emphasis on the field. Increase support of policy analyses of key issues related to Federal energy and water conservation and renewable energy use, to make updated policy changes to increase impacts of energy market changes, e.g., electric utility restructuring and green power procurement and Federal energy efficiency improvements as a contributor to environmental and economic benefits and goals. Continue to enhance databases of Federal facilities, energy consumption and costs, facility managers, energy efficiency, solar and other renewables and water conservation projects. These databases are used to fulfill mandated reporting requirements and used to</p>

### III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)

Activity	FY 1997	FY 1998	FY 1999
Planning, Reporting, and Evaluation (Cont'd)	<p>implemented by Federal energy managers and Federal employers. The theme of the information campaign as part of the technology transfer program was centered around the power of individual actions that can be taken to increase energy efficiency awareness and to use energy wisely, i.e., individual actions that make a difference. The campaign included the use of multi-media education tools, teleconferences, resources guides, action kits, and building the FEMP network of partners. The Regional Energy Action Project team of experts stationed in six regions (Seattle, Chicago, Denver, Boston, Atlanta, and Philadelphia) helped Federal energy managers in the field identify regional efficiency improvement opportunities in their buildings and operations. This approach, applied in all six regional support offices, resulted in 20 efficiency projects through these Regional teams. (PNNL, NREL, ORNL, McNeil Technologies, Inc.) (\$4,200)</p>	<p>and the FEMP's programs are able to be implemented by Federal energy managers and Federal employers. The theme of the information campaign will continue to center around the power of individual actions that can be taken to increase energy efficiency awareness and to use energy wisely, i.e., individual actions that make a difference. The campaign includes the use of multi-media educational tools, teleconferences, resources guides, action kits, and building the FEMP network of partners. The Regional Energy Action Project team of experts in six regions (Seattle, Chicago, Denver, Boston, Atlanta, and Philadelphia) will continue to provide ongoing support to FEMP's hands-on highly responsive, and customer-oriented new way of doing business. They will help Federal energy managers in the field identify efficiency improvements in their buildings and operations and ensure the delivery of a full range of regional technical, financial, outreach and related services. This approach will result in 20 efficiency projects through these Regional teams. (PNNL, NREL, ORNL, McNeil Technologies, Inc.) (\$3,800)</p>	<p>support reporting of energy efficiency impacts and perform analyses of Federal carbon emissions and efficiency related carbon reductions. Increase support to agencies through a series of regionally focused meetings. Deliver effective technology transfer programs to ensure that Federal energy reduction goals are clearly understood and the FEMP's programs are able to be implemented by Federal energy managers and Federal employers. The theme of the information campaign will continue to center around the power of individual actions that can be taken to increase energy efficiency awareness and to use energy wisely, i.e., individual actions that make a difference. The campaign includes the use of multi-media educational tools, teleconferences, resources guides, action kits, and building the FEMP network of partners. The Regional Energy Action Project team of experts in six regions (Seattle, Chicago, Denver, Boston, Atlanta, and Philadelphia) will provide ongoing support to FEMP's hands-on highly responsive, and customer-oriented new way of doing business. They will help Federal energy managers in the field identify efficiency improvements in their</p>

**III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

Activity	FY 1997	FY 1998	FY 1999
Planning, Reporting, and Evaluation (Cont'd)			buildings and operations and ensure the delivery of a full range of regional technical, financial, outreach and related services. This approach will result in 50 efficiency projects through these Regional teams. (PNNL, NREL, ORNL, McNeil Technologies, Inc.) (\$6,400)
	\$ 4,200	\$ 3,800	\$ 6,400
Capital Equipment	Limited capital equipment was acquired to support the research and development activities described above. These purchases were made from operating expense funds according to established reprogramming guidelines. (\$0)	Limited capital equipment will be acquired primarily to support the research and development activities described above. These purchases will be made from operating expense funds according to established reprogramming guidelines. (\$0)	Limited capital equipment will be acquired primarily to support the research and development activities described above. These purchases will be made from operating expense funds according to established reprogramming guidelines. (\$0)
	\$ 0	\$ 0	\$ 0
Program Direction	The following is a breakdown of the funding by Object Class:	The following is a breakdown of the funding by Object Class:	The following is a breakdown of the funding by Object Class:
	11.9 Personnel compensation \$1,419	11.9 Personnel compensation \$1,280	11.9 Personnel compensation* \$1,348
	12.1 Civilian personnel benefits \$271	12.1 Civilian personnel benefits \$256	12.1 Civilian personnel benefits \$257
	21.0 Travel and transportation	21.0 Travel and transportation	21.0 Travel and transportation
	of persons \$91	of persons \$110	of persons \$350
	25.2 Other services \$19	25.2 Other services \$154	25.2 Other services \$945
	Provided salaries, benefits, travel support, realignment costs for 23 FTEs to manage the Federal Energy	Provide salaries, benefits, travel support, realignment costs for 20 FTEs to manage the Federal Energy	Provide salaries, benefits, travel support, realignment costs for 20 FTEs to manage the Federal Energy

**III. Performance Summary: FEDERAL ENERGY MANAGEMENT PROGRAM (Cont'd)**

<u>Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
Program Direction (Cont'd)	Management Programs under the Energy Policy Act of 1992. (\$1,800)	Management Programs under the Energy Policy Act of 1992. The funding in other services includes training, employee incentive awards, library services, and a small contingency. (\$1,800)	Management Programs under the Energy Policy Act of 1992. The funding in other services includes training, employee incentive awards, library services, and a small contingency. (\$2,900)
	\$ 1,800	\$ 1,800	\$ 2,900
Federal Energy Management Program Total	\$19,800	\$19,800	\$33,868